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Simulator of Medical Emergency for Training - Database Management Module

Leonardo C. Villani Filho*, Otávio V. Miranda, Francisco Nardi.

Abstract

This project involves the development of a web application intended to produce a virtual training system for students of medicine. The software is designed to generate realistic medical scenarios in a friendly, engaging manner, fostering the practice of their knowledge even in the earlier stages of their courses. This research focuses on the database aspects.

Key words:

Medical, emergency, simulation, training, interactive, software, realistic scenarios, practice.

Introduction

This research project encompasses the conception and development of a medical emergency simulation game intended for teaching activities. It has medicine undergraduate students as its target audience.

The system will be the basis of a practice and improvement platform for medical students. It allows undergraduate students to test their knowledge in an environment free of the pressures of a real hospital emergency room. This proposal innovates due to its architecture built on top of a knowledge base, allied to an interactive simulation interface.

In the current stage, several modules of the game engine have been implemented. It was designed as an expandable framework, envisioned for keeping the interest of the user for an extended period, using video game elements such as controllable characters and progression systems. The intended final result is a more engaging experience for students to practice real-life skills. More refined art assets are still in production.

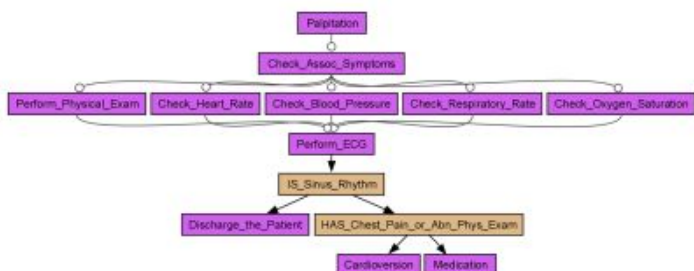
In the current stage of development, a dynamic interface was created to make the user feel immersed in an emergency room experience. There is a spatial interaction with the room, where the player clicks in areas to address exams or treatments, as well as the patient (not shown).



Furthermore, the application runs on a web server. Therefore, it can be assessed by anyone on the web.

Results and Discussion

We have implemented a login interface based on the enrollment of the students of medicine, and the knowledge base of the simulator.



Conclusions

In the present stage of the project, many of the most important features have been implemented. Future work involves further refinement and appropriate art assets as well as tests with the students.

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Curtis, M. D.; Shiu, K.; Butler, W. M. e Huffmann, J. C. *J. Am. Chem. Soc.* **1986**, *108*, 3335.